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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,287	02/16/2005	Tsuneco Maruyama	09852/0202546-US0	7762
7278 DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770	7590 07/28/2009		EXAMINER JOYCE, WILLIAM C	
			ART UNIT 3656	PAPER NUMBER
			MAIL DATE 07/28/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/525,287

**Applicant(s)**

MARUYAMA ET AL.

**Examiner**

William C. Joyce

**Art Unit**

3656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-17, 21-24 and 28 is/are pending in the application.  
4a) Of the above claim(s) 13-17 and 21-24 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 and 28 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to the amendment filed April 17, 2009 for the above identified patent application.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - a. Claims 1 and 6, the newly added limitation "mess-insertion direction" is unclear. It appears the term "mess" should be changed to --press--.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, and 6-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Weasler (USP 3,290,918).

Weasler discloses a rotation transmission member comprising: a substantially ring-shaped rotation transmission portion (12); and a supporting portion that is placed on an inner side of the rotation transmission portion and has a substantially circular cylinder shaped through hole that is formed by an inner circumferential surface, and that supports the rotation transmission portion, wherein the inner circumferential surface is provided with: a smooth ring-shaped surface (Fig. 1) that is placed adjacent to one end of the inner circumferential surface; and a plurality of protrusion shaped portions (14) that, taking the ring-shaped surface as a basis, protrude inwards in the radial direction, and extend along a portion of the length in the axial direction of the through hole, and wherein front end surfaces (22) in a press-insertion direction of the protrusion shaped portions incline toward the rear in the press-insertion direction from the inner circumferential surface to top ends of the protrusion shaped portions.

Weasler does not disclose the height of the protrusion shaped portions from the ring-shaped surface is 0.5 to 10  $\mu\text{m}$ . It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the protrusions with a height of 0.5 to 10  $\mu\text{m}$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the protrusions of Weasler with a height of 0.5 to 10  $\mu\text{m}$ , motivation being to minimize the cost of forming the rotary component while providing a predetermined torque capacity for a particular application.

Further, Weasler teaches the protrusion shaped portions are a plurality of convex bars that extend rectilinearly from one end of the ring-shaped surface to an end portion of the through hole, the plurality of convex bars are placed equally in the circumferential direction of the inner circumferential surface, wherein the rotation transmission portion and the supporting portion are formed integrally.

Weasler does not disclose the rotary component being formed from a sintered material, however it was notoriously known in the art to form rotary components from the claimed material. Official Notice is taken with respect to forming the rotary component from a sintered material, since it was well known in the art.

5. Claims 1-5 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumai (JP 2000-283264) in view of Weasler (USP 3,290,918).

Kumai illustrates a rotation transmission member comprising: a substantially ring-shaped rotation transmission portion (1); and a supporting portion that is placed

on an inner side of the rotation transmission portion and has a substantially circular cylinder shaped through hole that is formed by an inner circumferential surface, and that supports the rotation transmission portion, wherein the inner circumferential surface is provided with: a smooth ring-shaped surface (13) that is placed adjacent to one end of the inner circumferential surface; and a plurality of protrusion shaped portions (11) that, taking the ring-shaped surface as a basis, protrude inwards in the radial direction, and extend along a portion of the length in the axial direction of the through hole.

Kumai does not disclose the front end surfaces in a press-insertion direction of the protrusion shaped portions incline toward the rear in the press-insertion direction from the inner circumferential surface to top ends of the protrusion shaped portions. However, Weasler discloses (see above rejection) the claimed front end surfaces. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the protrusion portions with tapered front surfaces, as taught by Weasler, motivation being to facilitate in the assembly of the rotary component to a shaft.

Kumai does not disclose the height of the protrusion shaped portions from the ring-shaped surface is 0.5 to 10  $\mu\text{m}$ . It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the protrusions with a height of 0.5 to 10  $\mu\text{m}$ , since it has been held that where the general

conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the protrusions of Kumai with a height of 0.5 to 10  $\mu\text{m}$ , motivation being to minimize the cost of forming the rotary component while providing a predetermined torque capacity for a particular application.

Further, Kumai teaches the protrusion shaped portions are a plurality of convex bars that extend rectilinearly from one end of the ring-shaped surface to an end portion of the through hole, the plurality of convex bars are placed equally in the circumferential direction of the inner circumferential surface, the rotation transmission portion and the supporting portion are formed integrally.

Kumai does not disclose the rotary component being formed from a sintered material, however it was notoriously known in the art to form rotary components from the claimed material. Official Notice is taken with respect to forming the rotary component from a sintered material, since it was well known in the art.

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weasler (USP 3,290,918) as applied to claim 1 above, and further in view of Ohlson et al. (USP 5,855,444).

Weasler does not disclose a chamfered portion formed at the front end of the inner circumferential surface in the press-insertion direction. The prior art to Ohlson et al. illustrates a rotary component (1) having a chamfered portion (16) formed at the front end of the inner circumferential surface in the press-insertion direction. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the rotary component of Weasler with a chamfered portion, as taught by Ohlson et al., motivation being to facilitate in assembling the mating components.

### ***Response to Arguments***

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C. Joyce/  
Primary Examiner, Art Unit 3656